



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,537	12/03/2003	George W. McClurg	1823.0820002	3202
26111	7590	08/04/2005	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			TUCKER, WESLEY J	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/725,537	Applicant(s) MCCLURG ET AL.	
	Examiner Wes Tucker	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9-20-04, 8-19-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 27 is objected to because of the following informalities: The passage reading "internally reflected light exists" is apparently a typographical error and "exists" should be changed to "exits." Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 and 8 recite the limitation of "the communications system" where a communications system is not aforementioned. There is insufficient antecedent basis for this limitation in the claim.

Claims 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "writer's palm" is vague and indefinite because the term "writer" is non-limiting and unclear from the context of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

Art Unit: 2623

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 9-13, 22 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,038,332 to Fishbine et al.

With regard to claim 1, Fishbine discloses a system for capturing biometric data, comprising:

A non-planar prism configured to be illuminated by a light source (column 2, lines 51-56); and

A scanning optical system configured to capture image data of a portion of a person interacting with the non-planar prism (column 2, lines 51-56).

With regard to claim 2, Fishbine discloses the system of claim 1, wherein the non-planar prism comprises:

A curved portion configured to receive a biometric object of the person on a first surface (Fig. 1A, element 104 and column 2, lines 51-56) and to totally internally reflect light beams from the light source from a second surface (column 4, lines 23-26). The first and second surfaces are interpreted as the outer and inner surfaces of the cylinder respectively.

Art Unit: 2623

Fishbine further discloses a planar portion coupled at an angle to the curved portion through which the totally internal reflected light exits to be received by the scanning optical system (column 4, lines 52-60). The planar portion is interpreted as the mirror used in Fishbine.

With regard to claim 3, Fishbine discloses the system of claim 1, wherein the scanning optical system rotates around an axis of symmetry of the non-planar prism (column 2, lines 58-67).

With regard to claim 4, Fishbine discloses the system of claim 1, wherein an image in the scanning optical system rotates a received image to perform the scanning (column 2, lines 63-66 and Fig. 2).

With regard to claim 6, Fishbine discloses the system of claim 1, wherein the scanning optical system moves along an arcuate path to capture radial scan line images transmitted through a base of the non-planar prism (column 2, lines 58-66). Here Fishbine discloses that the image illumination/capture system rotates along the arc surface of the cylinder capturing what would be radial scan line images that can later be combined to form a continuous image of the captured palm print.

With regard to claim 9, Fishbine discloses the system of claim 1, further comprising a processing system comprising a means for converting the captured image

Art Unit: 2623

data from a first coordinate system into image data in a second coordinate system (column 5, lines 4-14).

With regard to claim 10, Fishbine discloses the system of claim 9, wherein the first coordinate system is a surface of the non-planar prism and the second coordinate system is a planar coordinate system (column 5, lines 31-45).

With regard to claim 11, Fishbine discloses the system of claim 1, further comprising an encoder configured to encode a position of the scanning optical system and to generate encoder data (column 5, lines 21-35).

With regard to claim 12, Fishbine discloses the system of claim 1, wherein the scanning optical system comprises a control system configured to control a motor, belt, and pulley system (column 5, lines 24-26).

With regard to claim 13, Fishbine discloses the system of claim 1, wherein the non-planar prism and the scanning optical system are configured to capture a palm print image as the image data (column 2, lines 8-20).

With regard to claim 22, Fishbine discloses the system of claim 1, wherein the light source is positioned within a cylindrical opening running along an axis of symmetry of the prism (Fig. 2).

With regard to claim 27, Fishbine discloses a system for capturing biometric data comprising:

A non-planar prism configured to totally internally reflect light from a curved portion, such that the totally internally reflected light exits a planar portion (column 4, lines 23-26). The first and second surfaces are interpreted as the outer and inner surfaces of the cylinder respectively. The planar portion is interpreted as the mask element 148 shown in Fig. 4.

Fishbine further discloses an image capturing system that receives the totally internally reflected light and generated image data therefrom of a person interacting with the curved portion (column 2, lines 51-67).

With regard to claim 28, Fishbine discloses wherein the image capturing system comprises a stationary lens (Fig. 2, element 140) and a stationary large area array (column 2, lines 50-67). The stationary large area array is interpreted as the set of images obtained by the rotating imager.

With regard to claim 29, Fishbine discloses wherein the lens is sized to capture all light leaving the non-planar prism that has been totally internally reflected from a section of the non-planar prism proximate an area in which the person interacted with the non-planar prism (Fig. 2, element 140 and claim 10).

Art Unit: 2623

With regard to claim 30, Fishbine discloses the system of claim 27, wherein the image capturing system rotates around an axis of symmetry of the non-planar prism (column 2, lines 58-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 7, 8, 14-19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,038,332 to Fishbine et al.

With regard to claim 5, Fishbine discloses the system of claim 4, but does not explicitly disclose wherein the element is an image rotator element selected from the group consisting of a dove prism and a Pachan prism. However dove prisms and Pechan prisms are well known in the art to be used to rotate images. Official notice is taken. Fishbine discloses the use of a mirror for rotating or inverting the image which has an equivalent effect to rotation using a prism (Fig. 2, element 156). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use

Art Unit: 2623

any kind of prism or mirror or device to rotate an image that might be found by routine experimentation to achieve a result in accordance with the desired effect.

With regard to claim 7, Fishbone discloses the system of claim 1, further comprising a processing system that converts the captured image data into transmittable information (column 5, lines 4-16). Fishbone does not explicitly disclose transmitting the image information by a [the] communications system. However Examiner takes official notice that it is exceedingly well known in the art that digital data of any kind is transmittable on a communications system which is also well known in the art in order to share data or information between two digital devices. Therefore it would have been obvious to one of ordinary skill in the art to use a communications system to transmit the digital data of the image captured and converted by Fishbone in order to share digital data between devices.

With regard to claim 8, the discussion of claim 7 applies and it follows that communications systems utilizing FIREWIRE are exceedingly well known in the art. Official notice is taken.

With regard to claim 14, Fishbone discloses the system of claim 1, wherein the non-planar prism and the scanning optical system are configured to capture a palm print image (abstract) but does not explicitly disclose wherein palm-print and fingerprint images as the image data. However it follows that on a half-cylinder (104) large enough

Art Unit: 2623

to accommodate a whole hand that both palm and finger prints are captured. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to enable the capturing of both palm and finger prints on the cylinder (104) so that an image of an entire hand is captured.

With regard to claim 15, the discussion of claim 14 applies.

With regard to claim 16, the discussion of claim 14 applies for the same reasons. If the cylinder (104) is big enough to accommodate both hands, then it follows that prints from both hands palms and fingers can be captured.

With regard to claim 17, the discussion of claim 14 applies.

With regard to claim 18, the discussion of claim 14 applies. The term writer's palm is interpreted simply as a user's palm.

With regard to claim 19, the discussion of claim 18 applies.

With regard to claim 24, the discussion of claims 7 and 8 applies.

Claims 20, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,038,332 to Fishbine et al. in view of U.S. Patent 5,526,436 to Sekiya.

With regard to claim 20, Fishbine discloses the system of claim 1, wherein the light source is positioned to direct light from the light source to an inside surface of a curved portion of the non-planar prism configured to totally internally reflect the light, but does not disclose wherein the prism is configured so that the light exists a planar portion of the non-planar prism. Sekiya discloses a prism configured to allow the capturing of a palm image with a prism configured so that the light exists a planar portion (Fig. 11, elements 4 and 5). Sekiya teaches the advantages to using a prism to reflect the captured image in the best way in order to avoid the scattering of light and to captured the best image. Fishbine discloses the use of a mirror to perform the similar function of reflecting the light of the prism to the imager (fig. 2, element 156). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the reflection of the prism to enable light exiting through a planar surface as taught by Sekiya in place of the mirror used for reflection in Fishbine because both devices serve to reflect the light and therefore the image in a manner that enables image transfer to an imager.

With regard to claim 21, Fishbine discloses the curved portion has a surface area sized to receive a hand and the discussion of claim 14-19 applies to the size of the

Art Unit: 2623

cylinder to be used. Fishbine does not disclose the planar portion. Sekiya discloses a prism with a planar portion located at an angle with respect to the curved portion and has a smaller surface area than the curved portion (Figs. 8 and 24).

With regard to claim 23, Fishbine discloses the system of claim 1, but does not disclose wherein the light source is positioned proximate a chamfered edge of the prism. Sekiya discloses a chamfered edged prism (Figs. 23 and 24). The discussion of claims 20 and 21 applies to the motivation for using such a prism.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,038,332 to Fishbine et al. in view of U.S. Patent 5,825,474 to Maase.

With regard to claim 25 and 26, Fishbine discloses the system of claim 1, but does not disclose an air treatment system to heat, sanitize, ionize or dehumidify the non-planar prism and/or portion of the person. Maase teaches the use of a heating system to inhibit condensation of moisture on the finger receiving surface (column 5, lines 60-67). Maase also teaches that a high pressure blower can also be used to direct air across the receiving surface of the finger receiving surface in order to dry the moisture of the user's hand (column 2, lines 25-30). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use an air treatment system to heat the surface of the surface of Fishbine in order to control the amount of

Art Unit: 2623

moisture on the receiving surface as taught by Maase in order to maintain a dry and accurate imaging surface.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

7-29-05



VIKKRAM BALI
PRIMARY EXAMINER